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PHAM, TIMOTHY X				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/581,207

Applicant(s)

MAYER ET AL.

Examiner

TIMOTHY PHAM

Art Unit

4154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on June 06, 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 34 is objected to because of the following informalities: the term "work element" (line 10) should be replaced with --network element--. Appropriate correction is required.
2. Claims 7 and 23 are objected to because of the following informalities: the term "PDP" is an acronym which can mean different things and/or change in meaning over time; hence, it would be desirable to write out the actual words to which the acronym refers.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Phan-Anh (WO 02/091785 A1).

Regarding claims 25-26, Phan-Anh discloses a user equipment (Fig. 2, reference 1) and a method for operation in a communications network comprising

a first network element (Fig. 2, reference 22 or 23, either alone or in combination),

the user equipment being arranged to determine that the first network element is out of service (page 4, lines 25-30; page 14, lines 16-28) by sending a request to the first network element and

determining that no response has been received from the first network element (page 14, lines 20-22);

wherein the user equipment is arranged on determining that the first network element is out of service (page 4, lines 25-30; page 14, lines 16-28),

to drop a bearer for signaling between the user equipment and the communications network (page 14, lines 16-28; e.g., the I-CSCF is forced to select a new controller entity S-CSCF2; therefore, the bearer established for communication with the first controller entity is inherently dropped),

discover or select a new a further first network element (page 14, lines 24-25), and
send to the further network element a message comprising an initial request for registration (page 6, lines 21-23) at the communications network.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-15, 17, 19-24, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phan-Anh (WO 02/091785 A1), and further in view of 3rd Generation Partnership Project; Technical Specification Group Service and System Aspects; Telecommunication Management;

Charging management; Charging data description for the IP Multimedia Subsystem (Release 5) (3GPP TS 32.225 v2.0.0 (2002-09); hereinafter “3GPP”).

Regarding claims 1, 19, and 34, Phan-Anh discloses a method, a network element, and a communication system for handling service failures in a communications network (Fig. 1) comprising a user equipment (Fig. 2, reference 1), a first network element (Fig. 2, references 30 and 31, either alone or in combination) and a serving network element (Fig. 2, reference 22 or 23, either alone or in combination), the method comprising the steps of:

receiving at the first network element a first message from the user equipment (Fig. 3, reference 1; page 10, lines 26-32) ;

transmitting the first message from the first network element to the serving network element (Fig. 3, reference 6) ;

detecting at the first network element that the serving network element is out of service (page 4, lines 25-30; page 11, lines 9-13);

Phan-Anh fails to specifically disclose determining at the first network element the type of the first message; and in dependence on the type of the first message sending from the first network element to the user equipment an error message including an indication that the serving network element is out of service.

However, 3GPP discloses determining at the first network element the type of the first message (page 18, section 2, note that the “SIP request” is acknowledge by the “SIP Response”); and

in dependence on the type of the first message sending from the first network element to the user equipment an error message including an indication that the serving network element is out of service (page 18, section 2 and Fig. 5.6, reference “SIP Response”, e.g., in case of failure an appropriate SIP error message is returned).

Therefore, taking the teachings of Phan-Anh in combination of 3GPP as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have determining at the first network element the type of the first message; and in dependence on the type of the first message sending from the first network element to the user equipment an error message including an indication that the serving network element is out of service to enhance managing communications over a network.

Regarding claim 2, Phan-Anh in combination of 3GPP discloses a method according to claim 1 above, comprising the further step of: receiving at the user equipment the error message (3GPP: page 18, section 2 and Fig. 5.6, reference “SIP Response”, e.g., in case of failure an appropriate SIP error message is returned).

Therefore, taking the teachings of Phan-Anh in combination of 3GPP as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to receive the error message at the user equipment for the advantages of allowing the originator to know that the communication failed and permitting it to take further action is desired.

Regarding claim 3, Phan-Anh in combination of 3GPP discloses a method according to claim 2 above, further comprising the step of:

subsequent to receiving the error message at the user equipment (see explanation set forth of claim 2 above),

sending a second message of a second type different from the type of the first message to initiate a registration from the user equipment to the first network element (Phan-Anh: page 6, lines 21-23; page 10, lines 10-14) .

Regarding claim 4, Phan-Anh in combination of 3GPP discloses a method to claim 1 above, wherein the method further comprises prior to receiving at the first network element a first message from the user equipment the step of: establishing a bearer for signaling between the user equipment and the communications network (Phan-Anh: page 3, lines 10-18; page 11, lines 21-24; 3GPP: page 61, section 7.2.5; note that this limitation is at the very least implicit from Phan-Anh and 3GPP disclosures).

Regarding claim 5, Phan-Anh in combination of 3GPP discloses a method according to claim 4, comprising the further steps of selecting a further serving network element and forwarding the message to the further serving network element (Phan-Anh: page 4, lines 23-29; page 6, lines 1-7).

Regarding claim 6, Phan-Anh in combination of 3GPP discloses a method according to claim 5 above, wherein the method comprises the further step of: registering at the further serving network element the user equipment (Phan-Anh: page 5, lines 14-18; page 6, lines 1-7; page 10, lines 9-13).

Regarding claim 7, Phan-Anh in combination of 3GPP discloses a method according to claim 4 above, wherein the bearer for signaling is a signaling or general purpose PDP context

(Phan-Anh: page 8, lines 7-20, note that the PDP (Packet Data Protocol) context is a data structure present on both the SGSN and the GGSN which contains the subscriber's session information when the subscriber has an active session; 3GPP: page 61, section 7.2.5; note that this limitation is at the very least implicit from Phan-Anh and 3GPP disclosures and/or an obvious expedient thereof based on the stated reasoning).

Regarding claim 8, Phan-Anh in combination of 3GPP discloses a method according to claim 1 above, wherein the communications network is an Internet Protocol multimedia subsystem (IMS) network (Phan-Anh: pages 5, lines 8-9).

Regarding claim 9, Phan-Anh in combination of 3GPP discloses a method according to claim 1 above, wherein the first network element is an Interrogating Call Session Control Function (I-CSCF) (Phan-Anh: Fig. 2, reference 31, page 2, lines 22-23).

Regarding claim 10, Phan-Anh in combination of 3GPP discloses a method according to the claim 1 above, wherein the first network element is a Proxy Call Session Control Function (P-CSCF) (Phan-Anh: Fig. 2, reference 30, page 2, lines 20-23).

Regarding claim 11, Phan-Anh in combination of 3GPP discloses a method according to claim 1 above, wherein the serving network element is a Serving Call Session Control Function (S-CSCF) (Phan-Anh: Fig. 2, references 22 and 23, pages 23-24).

Regarding claim 12, Phan-Anh in combination of 3GPP disclose a method according to claim 1 above, wherein the step of determining a type of message comprises determining the type of message based on the content of a predefined information element in the message (3GPP: page 18, section 2, note that the "SIP request" is acknowledge by the "SIP Response").

Regarding claim 13, Phan-Anh in combination of 3GPP discloses a method of claim 1 above, wherein the step of detecting at the first network element that the serving network element in a communications network is out of service (Phan-Anh: page 4, lines 23-32; page 14, lines 16-28), comprises the step of:

detecting that a predetermined time period has passed since the forwarding of the message from the first network element to the serving network element and before a response has been received from the serving network element and/or determining that the first message has been transmitted a predetermined number of times (3GPP: page 26; sections 5.1.2.2.1 in its entirety).

Therefore, taking the teachings of Phan-Anh in combination of 3GPP as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to detect that the serving network element is out of service by detect that a predetermined time period has passed since the forwarding of the message from the first network element to the serving network element and before a response has been received from the serving network element and/or determining that the first message has been transmitted a predetermined number of times for the advantages of promptly taking the appropriate action.

Regarding claim 14, Phan-Anh in combination of 3GPP discloses a method according to claim 1 above, wherein the type of the first message is a re-registration request (Phan-Anh: page 6, lines 21-23; page 17, claim 4).

Regarding claim 15, Phan-Anh in combination of 3GPP discloses a method according to claim 1, wherein the type of the second message is an initial registration request (Phan-Anh: page 6, lines 21-23).

Regarding claim 17, Phan-Anh in combination of 3GPP discloses a method of claim 12 above, wherein the information element indicates that the user has been successfully authenticated (Phan-Anh: page 3, lines 12-16).

Regarding claim 20, Phan-Anh in combination of 3GPP discloses further arranged to receive a further message of a second type (see 3GPP: page 17, Fig. 5.5, reference “8. 200 OK”) different from the type of the first message from the user equipment (see 3GPP: page 15, Fig. 5.3, reference “1 INVITE”).

Therefore, taking the combination of Phan-Anh and 3GPP as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to receive a further message of a second type different from the type of the first message from the user equipment to perform retry operations in response to a failure that occurs along the communication path.

Regarding claim 21, which recites a user equipment version of claim 3, see rationale as applied above.

Regarding claim 22, Phan-Anh in combination of 3GPP discloses a user equipment according to claim 21 above, further arranged to establish a bearer for signaling between the user equipment and the communications network (Phan-Anh: page 9, lines 24-28) and further arranged to respond to the error message by dropping the bearer for signaling between the user

equipment and the communications network (Phan-Anh: page 14, lines 16-28, e.g., the I-CSCF is forced to select a new controller entity S-CSCF2; therefore, the bearer established for communication with the first controller entity is inherently dropped).

Regarding claims 23-24, the claim limitation of claims 23-24 are similar to the limitations of claims 7 and 15, respectively. Therefore, claims 23-24 are rejected with the same reasons set forth in claims 7 and 15.

7. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phan-Anh and 3GPP as applied to claim 12 above, and further in view of Costa-Requena et al. (hereinafter “Costa-Requena” (US 2004/0225878 A1)).

Regarding claim 16, the combination of Phan-Anh and 3GPP teaches claim 12, but fails to specifically disclose wherein the information element indicates that the request is sent integrity protected. However, Costa-Requena discloses wherein the information element indicates that the request is sent integrity protected (see Costa-Requena: paragraph [0062]).

Therefore, Phan-Anh in combination of 3GPP and Costa-Requena as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have the information element indicates that the request is sent integrity protected to provide authorizations and authentication for an IP Multimedia Subsystem (IMS) (Costa-Requena: paragraph [0001]).

Regarding claim 18, the combination of Phan-Anh and 3GPP teaches claim 12, but fails to specifically disclose wherein the information element in the message is an integrity protected flag in an Authorization header of the message. However, Costa-Requena discloses wherein the

information element in the message is an integrity protected flag in an Authorization header of the message (see Costa-Requena: paragraphs [0062][0063]).

Therefore, Phan-Anh in combination of 3GPP and Costa-Requena as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have the information element in the message is an integrity protected flag in an Authorization header of the message to provide authorizations and authentication for an IP Multimedia Subsystem (IMS) (Costa-Requena: paragraph [0001]).

8. Claims 27, 30, 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phan-Anh and further in view of Herrero et al. (hereinafter "Herrero"; US 2005/0009520 A1).

Regarding claims 27, 30, 35, and 36, Phan-Anh discloses a method, a network element, a communication system, and a networking system, respectively, for determining a type of registration in a communications network comprising at least

a user equipment (Fig. 2, reference 1) and

a network element (Fig. 2, references 30 and 31, either alone or in combination; paragraph [0005]), comprising the steps of:

receiving at the network element a request for registration from the user equipment (Fig. 3, reference 1; page 10, lines 26-28);

detecting at the network element an information element in the received request (page 11, lines 14-19).

Phan-Anh fails to specifically disclose determining the content of the information, and

in dependence on the determined content of the information element determining whether the registration request is a first type of registration or a second type of registration.

However, Herrero discloses determining the content of the information (paragraph [0069][0076]), and

in dependence on the determined content of the information element determining whether the registration request is a first type of registration or a second type of registration (paragraphs [0118], [0144]).

Therefore, taking the teachings of Phan-Anh in combination of Herrero as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to determine the content of the information, and in dependence on the determined content of the information element determining whether the registration request is a first type of registration or a second type of registration to manage information related to identify message types of users in the system.

Regarding claim 29, Phan-Anh in combination of Herrero teaches a method of claim 27 above, wherein the first type of registration is a re-registration and the second type of registration is an initial registration (Phan-Anh: page 6, lines 21-23).

Furthermore, Herrero discloses wherein the first type of registration is a re-registration and the second type of registration is an initial registration (Herrero: paragraphs [0015], [0077], [0078]).

Therefore, taking the teachings of Phan-Anh in combination of Herrero as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have the first type of registration is a re-registration and the second type of registration is an initial registration to enhance system network registrations.

9. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phan-Anh and Herrero as applied to claim 30 above, and further in view of Costa-Requena.

Regarding claims 31-33, the limitation of claims 31-33 are similar to the limitations of claims 16-18, respectively. Therefore, claims 31-33 are rejected with the same reasons set forth in claims 16-18.

10. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Phan-Anh and Herrero, as applied to claim 27 above, further in view of 3GPP.

Regarding claim 28, Phan-Anh in combination of Herrero teaches a method of claim 27 above, wherein the communications network further comprises at least one serving network element (Phan-Anh: Fig.2, reference 22) and the method comprises the further steps of: transmitting the request from the first network element (Phan-Anh: Fig. 2, reference 31) to the serving network element (Phan-Anh: Fig. 3, reference "Step 8: SIP Register");

detecting the service network is out of service (Phan-Anh: page 4, lines 25-29; page 11, lines 10-12) by receiving no response from the serving network element (Phan-Anh: page 14, lines 20-22, e.g., When a I-CSCF entity ask the S-CSCF1 to accept the registration of the public ID #5, the S-CSCF1 may not respond),

selecting a further serving network element by the first network element (Phan-Anh: page 14, lines 23-25, e.g., In such situation the I-CSCF is forced to select a new controller entity S-CSCF2) if the register request is for the second type of registration (Phan-Anh: page 13, lines 19-28).

Phan-Anh in combination of Herrero fails to disclose sending a serving network element out of service message to the user equipment. However, 3GPP discloses sending a serving network element out of service message to the user equipment (see 3GPP: page 18, section 2; Fig. 5.6, reference "2. SIP Response message").

Therefore, taking the teachings of Phan-Anh in combination of Herrero and 3GPP as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to send a serving network element out of service message to the user equipment to enhance managing registrations in network communications.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY PHAM whose telephone number is (571)270-7115. The examiner can normally be reached on Monday-Friday; 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on 571-272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Timothy Pham/
Examiner, Art Unit 4154

/Vu Lc/
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